

## **SAFECAST: KEEPING OUR FEET DRY IN THE NORTH SEA LOWLANDS**

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SAFECoast is an Interreg IIIb project with 9 partner organisations from the Netherlands, Flanders, Denmark, Germany and the U.K. It focuses on the consequences of climate change and future spatial developments in flood risk management. The general question is 'How to manage our North Sea coasts in 2050?'. An overview of the actions can be found on [www.safecoast.org](http://www.safecoast.org). In the 'Comparison between different coastal flood risk methodologies' action the overall goal is to execute different risk methodologies existing in the North Sea area on the same coastal region. A first aim is building up knowledge of the sensitivity of the different scientific risk methodologies used. A second goal is exchanging knowledge and experiences of the different methodologies in the partner countries so they can all improve their own methodology by learning from each other, knowing they all have different physical, socio-economic and legal preconditions. Several elements have to be taken into account when comparing different numerical flood risk assessment methods. The flood risk is a mathematical combination of hazard and vulnerability. To make an estimation of the hazard, the probability of flooding, the flooded area, the water depth etc. have to be described in a numerical way. Therefore it is necessary to obtain detailed knowledge about the time-dependent failure mechanisms. The vulnerability, defined as 'the expected loss to the elements at risk in a specific area, as a possible consequence in the specific hazard situation' (Blum and Thorenz, 2005) is derived from land use maps, geo-coded spatial statistics and several socio-economic data sets. Finally, combining several hazard situations and the corresponding vulnerability, the risk can be calculated as an average value of the loss due to flooding in a specific area in a year. The improved Flemish methodology will be executed on an extensive test site along the Belgian coast in the 'Integrated master plan for Flanders coastal safety' action. Climate change and evolutions in spatial planning in the coastal area make it necessary to be prepared when flooding occurs. Controlling future risks needs translation of scientific results in a policy with the focus on integrated coastal zone management. This will be worked out in a master plan, where all stakeholders have to be involved in.

### References

Blum H. and F. Thorenz. 2005. COMRisk SP9 Pilot Study Langeoog, NLWKN Norden-Norderney, Germany, pp. 115 ([www.comrisk.org](http://www.comrisk.org)).